Kinetic	energy is	the product of	Mass into the square of velocity.
Linear	,,	,,	Length into force.
Surface	,,	,,	Surface into surface tension.
Volume	,,	,,	Volume into pressure.
Heat	,,	,,	Heat capacity (entropy) into temperature.
Electrical	,,	,,	Electrical capacity into potential.
Chemical	,,	,,	"Atomic weight" into affinity.

In each statement of factors, the "capacity factor" is placed first, and the "intensity factor" second.

In considering the "capacity factors," it is noticeable that they may be divided into two classes. The two first kinds of energy, kinetic and linear, are *independent of the nature of the material* which is subject to the energy. A mass of lead offers as much resistance to a given force, or, in other words, possesses as great inertia as an equal mass of hydrogen. A mass of iridium, the densest solid, counterbalances an equal mass of lithium, the lightest known solid. On the other hand, surface energy deals with molecules, and not with masses. So does volume energy. The volume energy of two grammes of hydrogen, contained in a vessel of one litre capacity, is equal to that of thirty-two grammes of oxygen at the same temperature, and contained in a vessel of equal size. Equal masses of tin and lead have not equal capacity for heat; but 119 grammes of tin has the same capacity as 207 grammes of lead; that is, equal atomic masses have the same heat capacity. The quantity of electricity conveyed through an electrolyte under equal difference of potential is proportional, not to the mass of the dissolved body, but to its equivalent; that is, to some simple fraction of its atomic weight. And the capacity factor of chemical energy is the atomic weight of the substance subjected to the energy. We see, therefore, that while mass or inertia are important adjuncts of kinetic and linear energies, all other kinds of energy are connected with atomic weights, either directly or indirectly.

Such considerations draw attention to the fact that quantity of matter (assuming that there exists such a carrier of properties as we term "matter") need not necessarily be measured by its inertia, or by gravitational attraction. In fact the word "mass" has two totally distinct significations. Because we adopt the convention to measure quantity of matter by its mass, the word "mass" has come to denote "quantity of matter." But it is open to any one to measure a quantity of matter by any other of its energy factors. I may, if I choose, state that those quantities of matter which possess equal capacities for heat are equal; or that "equal numbers of atoms" represent equal quantities of matter. Indeed, we regard the value of material as due rather to what it can do, than to its mass; and we buy food, in the main, on an atomic, or perhaps, a molecular basis, according to its content of albumen. And most articles depend for their value on the amount of food required by the producer or the manufacturer.

The various forms of energy may therefore be classified as those which can be referred to an "atomic" factor, and those which possess a "mass" factor. The former are in the majority. And the periodic law is the bridge between them; and yet, an imperfect connection. For the atomic factors, arranged in the order of their masses, display only a partial regularity. It is undoubtedly one of the main problems of physics and chemistry to solve this mystery. What the solution will be is beyond my power of prophecy; whether it is to be found in the influence of some circumstance on the atomic weights, hitherto regarded as among the most certain "constants of nature"; or whether it will turn out that mass and gravitational attraction are influenced by temperature, or by electrical charge, I cannot tell. But that some means will ultimately be found of reconciling these apparent discrepancies, I firmly believe. Such a reconciliation is necessary, whatever view be taken of the nature of the universe and of its mode of action; whatever units we may choose to regard as fundamental among those which lie at our disposal.

In this address I have endeavoured to fulfil my promise to combine a little history, a little actuality, and a little prophecy. The history belongs to the Old World; I have endeavoured to share passing events with the New; and I will ask you to join with me in the hope that much of the prophecy may meet with its fulfilment on this side of the ocean.

NOTES.

WE are glad to learn that Lord Armstrong, who has for the past few days been suffering from a slight sunstroke, is now much better. Dr. Gibb, of Newcastle, who was hastily summoned to Bamburgh Castle on Sunday, anticipates that if the progress is maintained his lordship will be quite well again by the end of the week.

LIEUT. DE GERLACHE'S expedition to the Antarctic regions left Antwerp on Monday on board the steamer *Belgica*.

PROF. CORFIELD has been elected an honorary member of the Royal Society of Public Health of Belgium, of which he has been a corresponding member for some years.

A SPECIAL number of the *Rendiconti della R. Accademia dei Lincei* announces the award of the following prizes, besides others for essays of a literary character:—The Royal Prize for physics to Prof. Adolfo Bartoli, of Padua, for his two monographs on the specific heat of water between the temperatures of 0° and 35°, and on the heat of the sun, and for other investigations. For the Ministerial Prize for physical and chemical science eight competitors entered, and the judges have awarded a prize of 1000 lire to Prof. Carlo Bonacini, of Modena, for his essays on orthochromatic and colour photography, and on the reflection and other properties of Röntgen rays; also awards of 250 lire each to Prof. Carlo Cattaneo, of Turin, for his notes on the conductivity of electrolytes and on the velocity of ions, and to Prof. Pietro Bartolotti for chemical investigations relating to the compound Rottlerine and other derivatives.

Science of August 6 prints a long article, by Mr. Cyrus Adler, on the movement towards an international catalogue of scientific works, and reprints the official reports of the proceedings of the conference held at the Royal Society a year ago. The report which the American delegates, Prof. Simon Newcomb and Dr. John S. Billings, presented to the Secretary of State, was, in accordance with their suggestion, referred to the Secretary of the Smithsonian Institution for his views as to the propriety and feasibility of the work proposed being undertaken by that Institution, and as to the probable cost. After considering the matter, Mr. S. P. Langley replied that if the work should be assigned to the Institution, a grant of not less than ten thousand dollars per annum would be required to carry it out. This reply and the documents to which it refers were transmitted to the U.S. Senate and House of Representatives towards the close of last year; and though no result has yet been reached, it is hoped that Congress will give support to the proposal, so that when the time comes the funds needed for cataloguing the scientific publications of the United States will be granted.

THE meeting of the French Association for the Advancement of Science, which opened at St. Étienne on August 5, was concluded on Saturday last. At the opening of the meeting, the President, M. Marey, gave an address on "La méthode graphique et les sciences experimentales." The address is printed in the *Revue Scientifique* for August 7. Next year's meeting will be at Nantes, while in 1899 the congress will be held at Boulogne, in order that visits may be exchanged with members of the British Association at Dover.

THE St. Petersburg correspondent of the *Times* reports that at Peterhof on Tuesday morning thirty-six members of the twelfth International Medical Congress, which is to be opened to-day at Moscow, were presented to the Tsar. Each country sending delegates was represented by a small deputation of its more eminent men now present in St. Petersburg, chosen from about 6000 altogether who are expected to attend the congress. The British representatives who had the honour of a presentation were Sir William MacCormac, Sir William Stokes, from Ireland, Prof. Stevenson, from Scotland, and Prof. Stevenson, of Netley, on behalf of the medical department of the British Army. On arriving at Peterhof by boat the party were met by Dr. Hirsch, the Tsar's medical attendant, and conducted in Court carriages to the Palace, where luncheon was served to them in the Hall of Mirrors. Each group was subsequently introduced to the presence of the Emperor, who gave them a cordial welcome. The Tsaritsa was also present.

We regret to record the death of Mr. S. E. Peal, of Assam, a frequent correspondent to these columns, and the author of a number of papers on astronomical subjects. We also notice the announcement of the death of Mr. Samuel Laing, author of "Modern Science and Modern Thought," and many other popular works of a similar character; Hofrath Dr. Alfred Ritter von Arneth, president of the Vienna Academy of Sciences; Prof. de Volson Wood, professor of mechanical engineering in the Stevens Institute of Technology, Hoboken, and formerly professor of mathematics and mechanics in the same institute; and Dr. Tholozan, Correspondant in the Section of Medicine and Surgery of the Paris Academy of Sciences.

The death is announced of Mr. Albert Marth, for many years a Fellow of the Royal Astronomical Society, to the publications of which he contributed a large number of valuable papers, particularly ephemerides for the satellites of the planets, and for physical observations of Mars and Jupiter. Mr. Marth (says the *Athenæum*) was born at Colberg, in Pomerania, on May 5, 1828, but came to England after he had completed his studies at Berlin and Königsberg, and was connected with the observatories at Regent's Park and Durham, afterwards assisting Lassell with his nebular and other observations at Malta. He discovered the small planet Amphitrite, No. 29, at Mr. Bishop's observatory in 1854. During the last nine years of his life he had been in charge of Colonel Cooper's observatory at Markree Castle, Co. Sligo; but his health had been failing, and he died somewhat suddenly whilst on a visit to his native country.

A large party of Prof. W. K. Brooks' biological students from the Johns Hopkins University, under the charge of Prof. J. E. Humphrey, are at present at Jamaica studying the tropical fauna and flora, and carrying on research work at the north-east side of the island.

We learn from *Science* that the following grants have been made to the United States Geological Survey for the present fiscal year: The topographical surveys, 175,000 dols.; for geological surveys and researches, 100,000 dols.; for investigation of coal and gold in Alaska, 5000 dols.; palæontology, 10,000 dols.; chemistry, 7000 dols.; gauging streams and water-supply, 50,000 dols.; mineral resources, 20,000 dols. There are also allowances for illustrations, printing, &c.

The September issue of the *American Naturalist* will appear under entirely new management. The magazine has been purchased from the estate of the late Prof. Edward D. Cope by a number of gentlemen who are interested in the advancement of the natural sciences, and Dr. Robert P. Bigelow, of the Massachusetts Institute of Technology, Boston, has accepted the post of editor-in-chief. He will be assisted by an editorial committee and by a board of associate editors.

At the beginning of next year, the Boyden Premium of the Franklin Institute, Philadelphia, will be awarded. The premium is the sum of one thousand dollars, and it will be to "any resident of North America who shall determine by experiment whether all rays of light, and other physical rays, are or are not transmitted with the same velocity." The memoirs describing in detail the apparatus employed in investigating this question, the mode of experimenting, and the results obtained, must be sent in before January 1, 1898.

We learn from the *Times* that it has been decided to appoint, in place of Mr. Rigby, late Superintendent of the Government Factory at Enfield, who has retired on a pension, a new officer with the title of Deputy-Director-General of the Ordnance Factories. He will receive a salary of 1500*l.* a year, with a suitable residence and with title to a pension. He will have primary charge of the Enfield Factory, but he will also assist the Director-General, Sir William Anderson, F.R.S., in his duties at Woolwich.

The ninth International Congress of Hygiene and Demography will be held in Madrid from April 10 to 17, 1898.

We have received from the Hon. Stephen Coleridge, Hon. Secretary of the Anti-vivisection Society, a copy of some correspondence which recently took place in the *St. James's Gazette* with reference to the use of curare in the practice of vivisection. Under the influence of curare it is believed that animals are still conscious of pain, and allegations have been made against some physiologists that they had used curare as an anæsthetic. We do not, as a rule, devote any attention to the reckless assertions so often made by anti-vivisectionists, our reason being that they are usually the result of ignorance which moves us more to pity than to anger. But as the correspondence referred to has apparently been sent to us for comment, we do not hesitate to say that we are astounded at the audacious impudence of persons who venture to criticise matters about which they know nothing. Not content with the Home Secretary's reply to Mr. Weir, in the House of Commons, that the charges made as to the mis-use of curare morphia were "absolutely baseless," Mr. Coleridge extracts from certain papers by Messrs. Bayliss, Hill, and Gulland the words: "Throughout the experiments morphia was the anæsthetic used," and triumphantly points to the "atrocious suffering" involved in experiments so performed. In the course of a reply to this attack, Mr. Leonard Hill said: "It is my invariable rule to perform all cutting operations on animals under complete chloroform anæsthesia. . . . It would be idle to repeat the full details of anæsthesia in every paper published in a journal of pure science—details which are, as a matter of course, recognised by all scientific readers. From such papers the officials of the Anti-vivisection Society piece together defamatory statements. The experiments decried by Edward Berdoe and Mr. Coleridge were carried out without the infliction of pain, and at the end of these experiments the animals were killed. It is my habit to inject from half to one grain of acetate of morphia into small dogs—a dose so large that it cannot be given with safety to an adult man. Such doses produce absolute coma in the animals. The use of morphia to prolong anæsthesia after the initial use of chloroform is a practice common among surgeons." We accept entirely Mr. Hill's explanation, and are amazed at the perverse interpretations which Mr. Coleridge and his fellow-agitators are good enough to put upon the writings of physiologists. The chief source of regret to us is that organisations like the Anti-vivisection Society, existing as they do upon the gullibility of an ill-informed public, should be permitted to publish their irresponsible accusations without fear of punishment. It would be better for humanity as well as science if such societies were not allowed to exist.

A motor-car race from Paris to Trouville, which excited as much interest as that from Paris to Dieppe, took place on Sunday last. A correspondent of the *Times* reports that twenty-two motor cars, of various designs, and twenty-six motor cycles started from St. Germain between 10 and 10.30 in the morning. The distance to Trouville is about 108 miles, and the motor cycle and car first in the Dieppe race also arrived first on Sunday. M. Jannin on his cycle rode the distance under four hours, while M. Gille's Hourgières-Bollée carriage covered the 108 miles in four hours and twenty minutes. Twelve of the motor cycles arrived in less than six hours, and seven of the cars in the same time.

THE first annual report on the work of the Geological Survey of Cape Colony has just been published. Prof. G. S. Corstorphine, the geologist to the Colony, throws cold water upon the belief that payable coal-seams exist beneath the Karoo. He points out that, though it is just possible a coal-seam may be found among the shales of the Karoo, the hope of such a lucky find becomes almost daily less, and the probability of an extensive coal deposit underlying the Karoo is very slight. Deep boring has been again and again advocated as a sure means of discovering coal, but Dr. Corstorphine says that so far there is no evidence geologically to warrant the renewal of such an expensive procedure as deep boring with such a purpose; and this conclusion is not only based upon the work carried out under his direction last year, but also on the results of previous investigations. The question of a probably water-supply from deep boring having been brought before the Commission, Dr. Corstorphine and Mr. A. W. Rogers (assistant geologist) made a preliminary survey of the Oudtshoorn and Prince Albert districts with a view to the selection of a site for a deep bore-hole. But so little is known about the structure of the country and the rocks composing it, that the people who are crying out for deep boring for artesian water will have to exercise a little patience, unless they are willing to provide a large sum of money to be spent upon a series of purely experimental bores. A large amount of information has yet to be obtained before a geologist would give an opinion as to the existence of considerable quantities of water at great depths in the Colony. The Commission, therefore, concludes (and rightly so) that an expenditure upon a deep bore-hole with the idea of finding water would be premature in the present state of knowledge.

AT the International Meteorological Conference held at Paris in September last, Mr. C. L. Wragge, Government Meteorologist for Queensland, drew attention to the importance of establishing an observatory on the top of Mount Kosciusko, in the south-eastern extremity of Australia, at a height of about 8000 feet. The conference expressed the opinion that such a station would possess really scientific importance, and that it would be useful to publish hourly observations made there. We are glad to learn from the *Brisbane Courier* that the Hon. R. Barr-Smith, of Torrens Park, South Australia, has offered to subscribe the whole amount necessary for the establishment of a tentative station at the summit of the above-mentioned mountain. Mr. Wragge hopes that the comparison of the results with those obtained from low-level stations will ensure a permanent observatory being established in the interest of Australasia.

DURING the last thirteen years the Indian Department of Revenue and Agriculture has published memoranda on the snowfall in the mountain districts, with forecasts of the probable character of the south-west monsoons. These statements and forecasts are drawn up by the Government Meteorological Reporter, and have been found of considerable use in predicting the probability of abnormal rainfall during the monsoon period of June to September, heavy and prolonged snowfall in the Western Himalayan area either preventing or delaying the extension of the monsoon current during the rainy season. The investigation seems to show that the general conditions are not unfavourable to the establishment of at least normal monsoon currents, although in parts there has been more snow than usual. It also shows that there has been a cyclical variation in the rainfall during the past five years; 1892–94 were characterised by excessive rain, and in the next two years the rainfall was deficient. The conclusion drawn from this is that there is considerable probability that the present year will be one of deficient rainfall and be the last year of the cycle, but that it will be much less unfavourable than last year. The variations in the rainfall are supposed to be due to some general, but as yet unknown, causes affecting a much larger area than India.

THERE are so many unsettled points with reference to the mode of formation of hailstones that careful observations of the internal structure of hailstones are always of interest, inasmuch as they may prove of assistance in working out the development-history of these meteoric objects. For this reason we are glad to note the following details which Dr. Alex. Hodgkinson observed in hailstones that fell in Wilmslow, Cheshire, during a storm of great severity on August 5. The hail varied in size from seven-eighths of an inch downwards, and the general shape was more or less conical with convex bases. As to the internal structure, Dr. Hodgkinson writes as follows:—"A nucleus of variable size existed in each hailstone, and this was surrounded by an outer layer of clear ice. In some of the larger specimens an intermediate zone of slightly opaque ice was seen, but more transparent than the nucleus. Under the microscope, with a power of about twenty diameters, the structure of the nucleus was seen to be coarsely crystalline, and profusely interspersed with minute air-bubbles, reminding one forcibly of the vacuoles which so frequently occur in specimens of quartz, and give rise to its opalescent appearance. The intermediate zone, when present, was constituted by the existence of similar vacuoles, but far smaller, and no crystalline structure was here perceptible. The outermost layer consisted of clear ice, apparently structureless under the microscope; but with the naked eye, and by variations in the incident light, this might be seen to possess a coarsely radiating structure, as if composed of large radiating crystals. On embedding a hailstone in a piece of perforated card, and examining with polarised light, there was no indication of tangential and radial strain in the body as a whole. The outer and intermediate layers were isotropic, but the individual crystals of the nucleus were distinctly double-refractive."

A DETAILED description of the large seismometrograph recently placed in the observatory of Catania is contributed by Prof. A. Riccò to vol. x. series 4^a of the *Dagli Atti dell'Accademia Gioenia di Scienze Naturali in Catania.* Prof. Riccò was led to erect this instrument because those of a similar character at Rome and Rocca di Papa gave such excellent results. The description is accompanied by an excellent photograph taken by means of the flash light.

FROM Profs. Elster and Geitel we have received a reprint of their last paper, published in *Wiedemann's Annalen*, dealing with the relation between the photo-voltaic current and the kathodic absorption of light when the angle of incidence and direction of polarisation of the incident light are varied. The experiments, which were conducted with the assistance of the Elizabeth Thompson Science Fund, of Boston, show that the current, so far as it depends on these factors, is determined by the amount of light absorbed at the kathode, and the agreement between the curves representing the current and the absorption affords a striking confirmation of the theory of metallic reflection.

ABOUT a quarter of a century has elapsed since Father Bertelli made his first observations on the microseismic movements of the ground. The accuracy of his results was soon disputed, because his pendulums were suspended from a bracket attached to the wall of his observatory, and a long and indecisive controversy ensued, which has at last been concluded by an interesting paper by M. S. Arcidiacono in the *Bollettino* of the Italian Seismological Society. The observations described in this memoir were made for more than three years with two normal tromometers at the observatory of Catania, one suspended from a thick wall, the other from an isolated column built on an old lava-stream. It was found that the mean displacement of the former instrument almost invariably exceeded that of the latter, though not differing greatly from it. Both tromometers show a prevalence of north-and-south displacements, due probably to the existence of Etna on the north; but the planes of oscillation coincided on only 381 days, while they differed on 667 days. One important conclusion is that, so far as regards magnitude of displacement, a normal tromometer suspended from the wall of a building may give useful results.

Aus dem Archiv der Deutschen Seewarte (nineteenth year, 1896), published under the direction of the Seewarte, contains four contributions of interest. The first of these is by Herrn. E. Knipping, who points out the importance of examining minutely the log-books of vessels with regard to the meteorological records, and the publication of the chief and most important results gained therefrom. He gives also samples of how the observations may be most simply printed and used as references. The appendix contains an application of the method advocated, the log-books employed being those that were contained in home-coming ships during the month of January in 1894. The second article is an addition to a previous one, which dealt with experiments relating to the "stopping down," or reduction in size, of the side-lights carried by ships. "Tafeln für die Vorausberechnung der Sternbedeckungen" is the title of the third part, and is contributed by Dr. Carl Stechert. This contains a description of the formulæ and tables for the prediction of occultations of stars, and a clear explanation as to how they should be used, both as regards approximate and very accurate results. The fourth and last part is perhaps the most important, and is by Herrn. E. Engelenburg, formerly Director of the Königl. Niederl. Meteorolog. Observatoriums in Utrecht. The subject dealt with is the aerodynamic theory of storms, and is preceded by a capital historical summary of the various theories propounded down to the present day. The article is too long and important to be discussed here, so we must simply refer our readers directly to the original. We may mention that a very useful "Litteratur-Nachweis" is attached.

AN interesting memoir, by C. T. Mörner, has recently appeared in the *Zeitschrift für physiologische Chemie*, dealing with a method of preserving fish, much employed in many parts of the northern districts of Sweden. The freshly-caught fish are cleaned, washed, and placed in wooden casks, and are then covered with brine. The casks are then closed and made air-tight, and placed in the open air in a sunny place, and allowed to remain there for from five to six weeks. The process of fermentation, which soon ensues, is controlled by means of a small vent-hole, which is opened from time to time. If the fermentation becomes too active the casks are placed in the shade, or some cooler place is chosen for them. As soon as the requisite stage in the process has been reached, the casks are opened, and the now-finished article is packed in smaller vessels for storage and distribution. This article of diet, known in Swedish as "surfisk," is eaten either raw or toasted. Mörner has endeavoured to ascertain what is the nature of the chemical products elaborated during the process of fermentation to which the fish are submitted. As accounting for the disagreeable odour which characterises this preparation, Mörner found amongst the gases emitted during fermentation the offensive-smelling methylmercaptan. Amongst the organic acids discovered in the "surfisk," whilst absent in the fresh fish, succinic acid, butyric acid, formic, acetic, and valeric acids were detected, whilst large quantities of ammonia and some ptomaïnes were also found, amongst the latter being choline and leucine. Curiously indol, skatol, phenol, putrescine and cadaverine, so characteristic of putrefactive processes in general, were absent in this preparation.

THE increasing interest taken in British bird-life has encouraged the editors of *Knowledge* to permanently devote a considerable space in each number to notes on the habits, distribution, migration, and so on, of British birds. A number of well-known ornithologists, including, amongst others, Messrs. W. Eagle Clarke, J. Cordeaux, H. E. Dresser, W. Warde Fowler, J. A. Harvie-Brown, and Thomas Southwell, have promised contributions. The department will be conducted by Mr. Harry F. Witherby.

THE discovery of human and other remains in the Halberstadt Cave, Jamaica, and of rock-carvings at St. John's, aroused considerable interest in the subject of aboriginal remains in the island. An exhibition of such remains, illustrating the life and customs of the aboriginal inhabitants, was held in the museum of the Institute of Jamaica at the end of 1895, and it not only brought to notice a number of relics not previously known, but led to various discoveries and investigations of importance to the anthropology of Jamaica and of the West Indies generally. Mr. J. E. Duerden, the curator of the museum, has prepared an interesting illustrated report upon these "Aboriginal Indian Remains in Jamaica," and has included in it a note, by Prof. A. C. Haddon, upon the craniology of the aborigines.

THE following are among the papers and other publications which have come under our notice within the past few days: *Indian Museum Notes* (vol. iv. No. 2), issued by the Trustees of the Indian Museum, Calcutta. Among the contents are short papers on a new species of Buprestid beetle (*Julodis atkinsoni*); two new species of gall-aphid; the well-known "Pipsa" fly (*Simulium indicum*); and many useful notes on insect pests and remedies.—The fifth part of Mr. Oswin A. J. Lee's fine work, entitled "Among British Birds in their Nesting Haunts, illustrated by the Camera" (Edinburgh: David Douglas), has been published. Previous issues of this work have already been noticed; the present part contains the plates illustrating the nests of the Corn Crake, Chaffinch, Capercaillie, Snipe, Mute Swan, Golden-crested Wren, and Sandpiper. Brief descriptions of the habits and haunts of these birds accompany the plates.—A critical review of the methods of determining minerals is contributed to the *Journal of the Franklin Institute* (August), by Dr. Joseph W. Richards.

THE additions to the Zoological Society's Gardens during the past week include a Macaque Monkey (*Macacus cynomolgus*, ♂) from India, presented by Mr. Walter Chamberlain; four Common Hedgehogs (*Erinaceus europæus*), British, presented by Mr. Evelyn Pelly; a Slender-billed Cockatoo (*Licmetis nasica*) from South Australia, presented by Mrs. M. D. Vibart; a Matamata Terrapin (*Chelys fimbriata*) from North Brazil, presented by Mr. W. J. Crummach; two Ribbon Snakes (*Tropidonotus saurita*), seven Striped Snakes (*Tropidonotus ordinatus sirtalis*), four Dekay's Snakes (*Ischnognathus dekayi*), two American Milk Snakes (*Coronella triangulum*), two Grass Snakes (*Contia vernalis*) from North America, presented by Mr. J. H. Fleming; a Grey Lemur (*Hapalemur griseus*) from Madagascar, three Altai Deer (*Cervus* sp. inc., ♂ ♀ ♀) from the Altai Mountains, a Circasian Wild Goat (*Capra caucasica*, ♂) from Caucasus, deposited; one Greater Vasa Parrot (*Coracopsis vasa*) from Madagascar, purchased; two Viscachas (*Lagostomus trichodactylus*), three Barbary Wild Sheep (*Ovis tragelaphus*), a Spotted Tinamou (*Nothura maculosa*), bred in the Gardens.